

A2  
The process of the invention comprises providing a motor system having at least one component selected from a stator and an armature, and at least one means for data measurement. Means for measuring data useful in the process of the invention include optic fibers, sensors, micro-machines, and combinations thereof. Data is collected from the data measurement means and transferred to a data collection station. When optic fibers are used, the fibers become both the means for measuring data and a means for transferring the data to the collection station. If the motor is subsurface or subsea, the data collection station could be at the surface or above the surface of the sea.

#### IN THE CLAIMS

Please amend claims 4 and 8 to read as follows:

A3  
4. (AS AMENDED) A process according to claim 1 wherein said means for measuring data is selected from optic fibers, sensors, micro-machines, and combinations thereof.

A4  
8. (AS AMENDED) A process according to claim 5 wherein said means for measuring data is selected from optic fibers, sensors, micro-machines, and combinations thereof.

#### PLEASE ADD THE FOLLOWING NEW CLAIMS 10 - 12.

A5  
-- 10. An apparatus for measuring and monitoring motor systems comprising:  
a motor system having at least one motor component selected from a stator and an armature, said at least one component connected to at least one electrical wire;  
an optic fiber wound around said electrical wire;  
means for collecting data with said optic fiber; and  
means for communicating said collected data to at least one sensor located outside said motor.

11. The apparatus according to claim 10 wherein said means for collecting data is an optic fiber wrapped around said electrical wire.

12. The apparatus according to claim 11 wherein said means for measuring data is encapsulated and attached to said electrical wire by covering or coating the electrical wire and the means for measuring data with an insulation material. --